

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

Claim 1 (previously presented) A method of building up an optical fiber preform in an installation provided with means enabling a preform held horizontally at ends of the preform between two mounting points by supporting the ends of the preform with end pieces for rotation about an axis of the preform and for relative movement in a direction parallel to the axis of the preform said installation also being provided with heater means for heating the preform by means of a plasma torch, which heater means is disposed radially relative to said preform and is associated with material supply means, so as to enable the preform to be manufactured in successive passes corresponding to the preform and the torch being displaced relative to each other, certain ones of the passes carried out with material being supplied and certain other ones of the passes being carried out without material being supplied, so that each successive pass leads to a new layer of material being deposited on the preform when material is supplied and to the most recent layer deposited being glazed when material is not supplied, said method interposing a one-ended reduction in the length of at least one layer, during a pass and starting from one new layer that is an intermediate layer, while a succession of concentric layers of material are being deposited on the preform in a manner such that the respective lengths of the layers, which lengths are determined by the relative displacements between the torch and the preform, are progressively shortened as a result of a progressive reduction in the lengths of the displacements, so that the thickness of deposited material that covers the preform and a portion

of each of the end-pieces decreases uniformly towards the ends, said one-ended reduction in layer length leading to a limitation of the thickness of material deposited on one of the end-pieces and on a limited-length preform zone that is longitudinally adjacent to said end-piece, at the level set by the layer deposited immediately prior to said one-ended reduction, and

wherein the one ended reduction in the length is greater than a reduction in length of an immediate prior layer from a second to the immediate prior layer.

Claim 2 (original) A method according to claim 1, wherein the one-ended reduction is performed after depositing a determined number of concentric layers leading to a given preform diameter.

Claim 3 (original) A method according to claim 2, wherein the given preform diameter, above which a one-ended reduction in layer length is performed is greater than the diameter of the endpiece in question, and less than 70 millimeters.

Claim 4 (original) A method according to claim 1, wherein provision is made for the one-ended reduction in layer length to lie in the range 10 millimeters to 200 millimeters.

Claim 5 (original) A method according to claim 1, providing a reduction in layer length that satisfies a linear relationship, at least beyond the layer whose length is reduced at one end and that is deposited first, and at that end of the preform at which said reduction is provided.

Claim 6 (previously presented) A method according to claim 1, providing a reduction in layer length that satisfies a non-linear decreasing relationship, at least beyond the layer whose length is reduced at one end and that is deposited first, and at that end of the preform at which said reduction is provided, and wherein the non-linear decreasing relationship is satisfied prior to a first drawing of the preform for separation from one of the end-pieces.

Claim 7 (original) A method according to claim 1, including at least one hot drawing operation performed to separate a preform from one of the end-pieces in said limited-length preform zone which is adjacent to said end-piece, after said succession of layers required for forming the preform has been deposited.

Claim 8 (original) A method according to claim 1, including a hot-drawing operation performed in two steps, separated by a preform glazing operation, in said limited-length preform zone which is adjacent to an end-piece so as to separate the preform and said end-piece, the first drawing step being associated with heating to the core causing softening by melting in said limited-length preform zone, and producing a reduction in diameter, the second step also being associated with heating to the core causing softening by melting and achieving full separation.

Claims 9-17 (canceled)